ABSTRACT

When a semiconductor wafer is formed thin, warping of the wafer is to be prevented. Semiconductor elements are formed on a semiconductor wafer, a protective tape is affixed to a surface of the semiconductor wafer, and a back side of the semiconductor wafer is ground to a predetermined thickness. A die bonding film is affixed to the back side of the semiconductor wafer and further a dicing tape is affixed to the wafer back side. The dicing tape affixed to the semiconductor wafer is held by a holding jig. The protective tape is peeled off from the wafer surface and the die bonding film is heated to improve the adherence between the semiconductor wafer and the die bonding film. The semiconductor wafer is subjected to dicing for separation into individual semiconductor chips. The semiconductor chips are die-bonded in a predetermined number onto a wiring substrate to fabricate a semiconductor device.